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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/770,699	GEALY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Trinh	2822	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment & Terminal Disclaimers filed June 23, 2005.
2. ☒ The allowed claim(s) is/are 38-43,45-49,52-58 and 60.
3. ☒ The drawings filed on 01 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance.</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|---|--|

  
**Michael Trinh**  
 Primary Examiner

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### **DETAILED ACTION**

\*\*\* This office action is in response to Applicant's Amendment filed June 23, 2005. Claims 38-43,45-49,52-58,60 are currently pending. Claims 1-37,44,50-51,59,61-80 were canceled.

#### ***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

#### **IN THE SPECIFICATION:** (Just for updating information of parent application)

\*\* Page 1, line 14, change "This application is a divisional of copending United States patent application Serial No. 09/286,807, filed April 6, 1999" to

--This application is a divisional of copending United States patent application Serial No. 09/286,807, filed April 6, 1999, now U.S. Patent No. 6,696,718.--

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2. The terminal disclaimers filed on June 23, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Serial Numbers 10/299,145, 10/299,728, 10/299752, and 10/172,253 have been reviewed and accepted. The terminal disclaimers have been recorded.

#### ***Allowable Subject Matter***

3. Claims 38-43,45-49,52-58, and 60 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

Applicant's terminal disclaimers and amendment filed on June 23, 2005 have overcome the rejections in the last office action. The references of record including Fukuzumi et al (6,222,722) and Chen (6,077,742), New (5,824,590), etc., do not fairly anticipatively disclose each and every aspect of the claimed method, or fairly make a prima facie obvious case of the claimed method for forming a capacitor, in combination with other processing claimed

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limitations, such as in base claim 38, the inclusion of forming a non-smooth mold in the recess and on the first surface of the interconnect; removing a portion of the non-smooth mold from the first surface of the interconnect; forming a first electrode in the recess of the substrate assembly on the non-smooth mold and the first surface of the interconnect, wherein the first electrode is selected from the group consisting of transition metals, conductive oxides, alloys thereof, and combinations thereof, and wherein the first electrode extends above an uppermost surface of the substrate assembly; forming a dielectric on the first electrode and an uppermost surface of a the substrate assembly; heating the dielectric in the presence of oxygen-containing ambient; and forming a second electrode on the dielectric and the uppermost surface of the substrate assembly, wherein forming the second electrode includes forming at least one non-smooth surface; and, wherein as in base claims 52 and 58, a layer of hemispherical grain polysilicon is formed in the recess of the substrate assembly and on the first surface of the interconnect.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone numbers for the organization where this application proceeding is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Oacs-6



Michael Trinh  
Primary Examiner